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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/655,165	09/04/2003	Deryck J. Williams	12557-021001	5413
26161	7590	06/26/2006		EXAMINER
FISH & RICHARDSON PC				PAK, JOHN D
P.O. BOX 1022				
MINNEAPOLIS, MN 55440-1022			ART UNIT	PAPER NUMBER
			1616	

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/655,165	WILLIAMS ET AL.	
	Examiner	Art Unit	
	JOHN PAK	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 13 April 2006.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,4-12,15-31,34-42 and 45-74 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,4-12,15-31,34-42 and 45-74 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

This Office action is in reply to applicant's response of 4/13/2006.

Claims 1, 4-12, 15-31, 34-42 and 45-74 are pending in this application. They will be examined herein to the extent that they read on the elected subject matter of record.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4-6, 9-12, 15-16, 18-21, 23, 25, 31, 34-36, 39-42, 45-46, 48-51, 53, 55, 60, 62 are rejected under 35 U.S.C. 102(e) as being anticipated by Zobel et al. (US 6,544,929).

Zobel et al. explicitly disclose a herbicidal composition that can contain (a) isoxaflutole, (b) glyphosate/glufosinate, and (c)(v) ester of glycol, such as glycerol ricinolate<sup>1</sup> (see column 1, lines 45-55; column 2, lines 7-9). Diluent, carrier, 0.05-10 wt% surface active agent, and penetrating agents are disclosed (column 2, lines 47-67; column 3, lines 60-61). Aqueous and liquid formulations are disclosed, including a formulation that contains surfactant, water miscible solvent and water (column 3, lines

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<sup>1</sup> It is noted that glycerol ricinolate is an ester of ricinoleic acid wherein in applicant's formula convention, R<sub>1</sub> is the glycerol moiety and the C(O)-R<sub>2</sub> is the ricinoleic acid moiety.

28-41; column 4, lines 18-38, in particular lines 17-22). The herbicidal composition is applied to control weeds in a crop locus, i.e. after planting (column 5, lines 25-27).

Although Zobel et al. do not expressly disclose nematicidal activity of glycerol ricinolate, its agricultural formulation and use are explicitly taught. Application to the field, i.e. plants and soil, is taught since herbicidal application to a crop locus is taught. It is the Examiner's position that since the same exact compound is being applied to the same exact substrate where nematodes are found, the same exact nematicidal activity as applicant's claimed effect would be obtained.

Claims 5-6, 10-12, 35-36 and 40-42 are included in this ground of rejection because the language of those claims does not actually require  $R_1$  and/or  $R_2$  to have a  $C_{1-2}$  substituent on the main carbon chain of  $R_1$  and/or  $R_2$ . Mere further description of one of many alternatives does not constitute a required claim feature.

Claims 23 and 53 require a permeation enhancer. It is the Examiner's position that Zobel's penetrating agent would have the same function as applicant's permeation enhancer.

The claims are thereby anticipated.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-12, 15-16, 18-23, 25-31, 34-42, 45-46, 48-53 and 55-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 59-27802 in view of Farm Chemicals Handbook '98.

JP 59-27802 discloses a non-toxic agrochemical composition for reducing germination of ears of crop plants such as wheat and rice without causing phytotoxicity (full document cited, see JPAB English abstract JP359027802A). The active component is one or more higher fatty acid alkyl esters and higher fatty acid alkenyl esters, wherein spray application is disclosed (full document cited, see HCPLUS English abstract 1984:419087). Alkyl esters of 12-hydroxy-9(Z)-octadecenoic acid, i.e. *ricinoleic acid*, are disclosed (see page 3, substances numbered 76-81; see also HCPLUS English abstract 1984:419087). Use in the form of a diluted liquid formulation is disclosed (see JPAB English abstract JP359027802A).

Farm Chemicals Handbook '98 discloses oxamyl to be a known insecticide, nematicide and acaricide (page C290, left column). This secondary reference is cited to establish the fact that the additional active agent of applicant's claims 27 and 57 is known for the use for which it is being claimed.

Although JP 59-27802 does not expressly disclose nematicidal activity of esters of 12-hydroxy-9(Z)-octadecenoic acid, i.e. ricinoleic acid, the reference nonetheless teaches their agricultural formulation and use. Application to the field, i.e. plants and

soil, is taught since non-phytotoxic application is taught. It is the Examiner's position that since the same exact compound is being applied to the same exact substrate where nematodes are found, the same exact nematicidal activity as applicant's claimed effect would be obtained.

Inclusion of an aqueous surfactant, though apparently not expressly disclosed in JP 59-27802, would have been obvious to the ordinary skilled artisan, who would have been motivated to formulate the fatty esters with a common and convenient agricultural carrier such as water with sufficient surface active agents to ensure adequate admixture and uniform application.

Claims 5-6, 10-12, 35-36 and 40-42 are included in this ground of rejection because the language of those claims does not actually require R<sub>1</sub> and/or R<sub>2</sub> to have a C<sub>1-2</sub> substituent on the main carbon chain of R<sub>1</sub> and/or R<sub>2</sub>. Mere further description of one of many alternatives does not constitute a required claim feature.

Claim 22 and 52 require specific commercial surfactants. For example, Makon 10 is an ethoxylated alkylphenol, Brij 35, Brij 97 and Tergitol TMN 6 are ethoxylated alcohols, Dowfax 3B2 is a diphenyl sulfonate. One having ordinary skill in the agrochemical art would have been motivated to utilize such commercially available surface active agents to formulate fatty acid esters in water in order to conveniently and uniformly apply the formulation to substrates where nematode control is needed.

Claims 23 and 53 require a permeation enhancer. Use of such ancillary agent for the purpose of improving delivery of the active agent would have been obvious. The motivation to do so arises from the advantage of obtaining improved permeation or penetration of the active esters of 12-hydroxy-9(Z)-octadecenoic acid.

Claims 25-26 and 55-56 require a cosolvent such as isopropanol. Given the lipid-like nature of esters of 12-hydroxy-9(Z)-octadecenoic acid, additional formulation agents such as a cosolvent to better solvate or formulate the esters would have been plainly suggested. Isopropanol is a universal solvent and widely used in myriad applications, including agricultural applications. Its use would therefore have been fairly suggested.

Claims 27 and 57 require the further use of an additional active agent such as oxamyl. The cited secondary reference clearly teaches that oxamyl has well known, broad pesticidal properties. One having ordinary skill in the art would have been motivated to utilize such a versatile and active pesticide such as oxamyl in order to provide protection of crops against invertebrate pests.

Claims 28-29 and 58-59 require an antioxidant such as BHA and BHT. Such ingredients are notoriously well known antioxidants, and their use would have been obvious from the knowledge of fatty acid chemistry. The unsaturated carbon chain in the fatty acid moiety is subject to oxidation, so use of known antioxidants would have

been fairly suggested when using an unsaturated fatty acid derivative such as esters of 12-hydroxy-9(Z)-octadecenoic acid.

Claim 30 requires the use of at least two different compounds of the elected formula. JP 59-27802 teaches the use of one or more esters of fatty acids (see HCAPLUS abstract 1984:419087), so such two different compounds are suggested.

Claims 60-66 recite various application methods, such as applying to plants or soils, soil before planting, soil after planting, applying to plant roots or seeds, drip system, drench system. Given that the esters of 12-hydroxy-9(Z)-octadecenoic acid are taught to have beneficial plant growth regulating activity, its use at various stages of agricultural production and application to various types of plant or soil parts would have been obvious, particularly in combination with a beneficial pesticide such as oxamyl. Application to soil via a drip or drench system would have been a matter of routine optimization for the ordinary skilled artisan in this field, depending on the exigencies of the application needs and field condition.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited references.

Claims 1, 4-6, 9-12, 15, 17-20, 31, 34-36, 39-42, 45, 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuboi et al.

Tsuboi et al. disclose the insecticidal activity of t-butyl ester of (9Z,11E)-13-hydroxy-9,11-octadecadien-15-ynoate (page 1103 and 1107).

Although Tsuboi et al. do not expressly disclose nematicidal activity of t-butyl ester of (9Z,11E)-13-hydroxy-9,11-octadecadien-15-ynoate, the reference nonetheless teaches its insecticidal activity. Because insect control is typically required in the soil and on plant surfaces, where soil/foliar nematode control is also required, it is the Examiner's position that the application of the same exact compound to the same exact substrate where nematodes are found, would deliver the same exact nematicidal activity, as claimed by applicant.

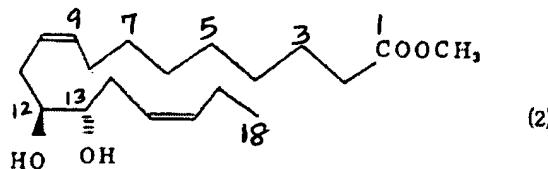
Inclusion of an aqueous surfactant, though apparently not expressly disclosed in the cited reference, would have been obvious to the ordinary skilled artisan, who would have been motivated to formulate the fatty esters with a common and convenient agricultural carrier such as water with sufficient surface active agents to ensure adequate admixture and uniform application.

Claims 5-6, 10-12, 35-36 and 40-42 are included in this ground of rejection because the language of those claims does not actually require R<sub>1</sub> and/or R<sub>2</sub> to have a C<sub>1-2</sub> substituent on the main carbon chain of R<sub>1</sub> and/or R<sub>2</sub>. Mere further description of one of many alternatives does not constitute a required claim feature.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited reference.

Claims 1, 4-12, 15, 18-20, 31, 34-42, 45, 48-50, 60-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 62-99348.

JP 62-99348 discloses the following ester compound as having prostaglandin-like physiological activity, which is useful as a pharmaceutical agent and agricultural antifungal agent (see page 4 of the document, structure (2); see also English abstract, JP362099348A):



Use as a medicine with similar activity of prostaglandin and also as a pesticide is disclosed (see Derwent abstract, 1987-167062).

Although JP 62-99348 does not expressly disclose nematicidal activity of esters of the ester compound of structure (2), the reference nonetheless teaches its pharmaceutical and agricultural formulation and use. Application to the field, e.g. plants and soil, is fairly suggested since antifungal agents are typically applied thereto. It is

the Examiner's position that since the same exact compound is being applied to the same exact substrate where nematodes are found, the same exact nematicidal activity as applicant's claimed effect would be obtained.

Inclusion of an aqueous surfactant, though apparently not expressly disclosed in JP 62-99348, would have been obvious to the ordinary skilled artisan, who would have been motivated to formulate the disclosed ester with a common and convenient agricultural carrier such as water with sufficient surface active agents to ensure adequate admixture and uniform application.

Claims 5-6, 10-12, 35-36 and 40-42 are included in this ground of rejection because the language of those claims does not actually require  $R_1$  and/or  $R_2$  to have a  $C_{1-2}$  substituent on the main carbon chain of  $R_1$  and/or  $R_2$ . Mere further description of one of many alternatives does not constitute a required claim feature.

Claims 60-66 recite various application methods, such as applying to plants or soils, soil before planting, soil after planting, applying to plant roots or seeds, drip system, drench system. Given that the ester of structure (2), supra, is taught to have beneficial antifungal activity, its use at various stages of agricultural production and application to various types of plant or soil parts would have been obvious. Application to soil via a drip or drench system would have been a matter of routine optimization for the ordinary skilled artisan in this field, depending on the exigencies of the application needs and field condition.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited reference.

Claims 1, 4-12, 15-31, 33-42, 45-74 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-47 of U.S. Patent No. 6,887,900. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons.

Patented claims 1-47 are directed to substantially the same subject matter as applicant's claims, with minor overlap in scope in substituent recitations. For example, the esters of the patented claims are all readable on instant claims. The esters in the patented claims have the same activity and said esters are formulated with the same excipients. Therefore, one of ordinary skill in the art would have recognized the instant invention as an obvious variation of the invention patented in claims 1-47 of U.S. Patent No. 6,887,900, because use of known commercial surfactants or known additional active insecticide or nematicide would have been obvious for the benefit of providing improved formulation or pesticidal properties.

Applicant's only remark relative to this ground of rejection is that a terminal disclaimer will be filed upon notification of allowable claims. Applicant is advised to file

the disclaimer early in prosecution to avoid any further delay, especially when the case is after-final. If the case is in condition for allowance but for the terminal disclaimer(s), another Office action may have to be issued to account for the remaining grounds of obviousness type double patenting rejection. This rejection cannot be withdrawn in the absence of the terminal disclaimer.

Claims 1, 4-12, 15-31, 34-42, 45-74 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-21, 24-55, 61-65 of U.S. Patent No. 6,903,052 in view of Farm Chemicals Handbook '98. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons.

Patented claims are directed to substantially the same subject matter as applicant's claims, with minor overlap in scope in substituent recitations. For example, the esters of the patented claims are all readable on instant claims. The esters in the patented claims have the same activity and said esters are formulated with the same excipients.

Farm Chemicals Handbook '98 discloses oxamyl to be a known insecticide, nematicide and acaricide (page C290, left column). This secondary reference is cited to establish the fact that the additional active agent of applicant's claim 27 is known for the use for which it is being claimed.

Therefore, one of ordinary skill in the art would have recognized the instant invention as an obvious variation of the invention patented in claims 1-21, 24-55, 61-65 of U.S. Patent No. 6,903,052, because use of known commercial surfactants or known additional active insecticide or nematicide would have been obvious for the benefit of providing improved formulation or pesticidal properties.

Applicant's only remark relative to this ground of rejection is that a terminal disclaimer will be filed upon notification of allowable claims. Applicant is advised to file the disclaimer early in prosecution to avoid any further delay, especially when the case is after-final. If the case is in condition for allowance but for the terminal disclaimer(s), another Office action may have to be issued to account for the remaining grounds of obviousness type double patenting rejection. This rejection cannot be withdrawn in the absence of the terminal disclaimer.

For the foregoing reasons, all claims must be rejected again.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is **(571)272-0620**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Johann Richter, can be reached on **(571)272-0646**.

The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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